PATENT APPLICATION
DOCKET NO.: 1818.1030-003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors:	Jonathan S. Stamler, Andrew J. Gow and David J. Singel		
Application No.:	10/066,320	Group Art Unit:	1654
Filed:	January 31, 2002	Examiner:	Gupta, Anish
Confirmation No.:	1921		
Title:	METHOD FOR DETERMINING PHYSIOLOGICAL EFFECTS OF HEMOGLOBIN		

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
on 7/9/03 (Date) Denise Caredeo (Signature)
Denise Caredeo
Typed or printed name of person signing certificate

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

[ ] under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)

[X] under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

[ ] under 37 CFR 1.97(c) together with either:

[ ] a Statement under 37 CFR 1.97(e), as checked below, or

[ ] a $180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

[ ] under 37 CFR 1.97(d) together with:

[ ] a Statement under 37 CFR 1.97(e), as checked below, and

[ ] a $180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

[ ] under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

[ ] Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or

[ ] No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)
Applies to original applications (other than design) filed on or after May 29, 2000

[ ] Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

[X] Enclosed herewith is form PTO-1449:

[X] Copies of the cited references are enclosed.

[ ] Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]

[ ] The listed references were cited in the enclosed International Search Report in a counterpart foreign application.

[ ] The "concise explanation" requirement (non-English references) for reference(s) [ ] under 37 CFR 1.98(a)(3) is satisfied by:

[ ] the explanation provided on the attached sheet.

[ ] the explanation provided in the Specification.

[ ] submission of the enclosed International Search Report.

[ ] submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.

[ ] the enclosed English language abstract.

[ ] Applicant requests that the following non-published pending applications be considered:

Examiner's Initials

_____ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

_____ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

_____ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

_____ _____

Examiner Date

[ ] A copy of each above-cited application, including the current claims, is enclosed.

[ ] A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

[ ] A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

[ ] Please charge Deposit Account 08-0380 in the amount of $[ ]. A copy of this Statement is enclosed.

[X] Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

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Dated: 7-9-03

PTO-1449 REPRODUCED

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

July 8, 2003

(Use several sheets if necessary)

ATTORNEY DOCKET NO.	APPLICATION NO.	
1818.1030-003	10/066,320	
APPLICANT		
Jonathan S. Stamler, *et al.*		
FILING DATE	CONFIRMATION NO.	GROUP
January 31, 2002	1921	1654

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF. NO.	DOCUMENT NUMBER	ISSUE DATE / PUBLICATION DATE	NAME
	AA	6,203,789 B1	03/20/01	Stamler, *et al.*
	AB	2003/0008300 A1	01/09/03	Stamler, *et al.*
	AC	2002/0037839 A1	03/28/02	Stamler, *et al.*
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AL	WO 98/34955	13 Aug 98	PCT		
	AM					
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OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

	AR	Alayash, Abdu I., "Hemoglobin-based Blood Substitutes: Oxygen Carriers, Pressor Agents, or Oxidants?," *Nature Biotechnology,* 17:545-549 (1999).
	AS	Alayash, Abdu I. *et al.*, "Hemoglobin and Free Radicals: Implications for the Development of a Safe Blood Substitute," *Molecular Medicine Today,* 1:122-127 (1995).
	AT	Ascenzi, Paolo *et al.*, "Cooperative Effect of Inositol Hexakisphosphate, Bezafibrate, and Clofibric Acid on the Spectroscopic Properties of the Nitric Oxide Derivative of Ferrous Human Hemoglobin," *Journal of Inorganic Biochemistry,* 50:263-272 (1993).
	AU	Cassoly, Robert *et al.*, "Conformation, Co-operativity and Ligand Binding in Human Hemoglobin," *Journal of Molecular Biology,* 91:301-313 (1975).
	AV	Chétrite, Gérard *et al.*, "Affinity of Hemoglobin for the Cytoplasmic Fragment of Human Erythrocyte Membrane Band 3," *Journal of Molecular Biology,* 185:639-644 (1985).
	AW	Doherty, Daniel H. *et al.*, "Rate of Reaction with Nitric Oxide Determines the Hypertensive Effect of Cell-Free Hemoglobin," *Nature Biotechnology,* 16:672-676 (1998).
	AX	Eich, Raymund F. *et al.*, "Mechanism of NO-Induced Oxidation of Myoglobin and Hemoglobin," *Biochemistry,* 35:6976-6983 (1996).
	AY	Falke, Joseph J. *et al.*, "Molecular Mechanisms of Band 3 Inhibitors. 1. Transport Site Inhibitors," *Biochemistry,* 25:7888-7894 (1986).
	AZ	Falke, Joseph J. *et al.*, "Molecular Mechanisms of Band 3 Inhibitors. 2. Channel Blockers," *Biochemistry,* 25:7895-7898 (1986).
	AR2	Fox-Robichaud, Alison *et al.*, "Inhaled NO as a Viable Antiadhesive Therapy for Ischemia/Reperfusion Injury of Distal Microvascular Beds," *Journal of Clinical Investigation,* 101(11):2497-2505 (1998).
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INFORMATION DISCLOSURE CITATION IN AN APPLICATION	APPLICANT Jonathan S. Stamler, *et al.*	
July 8, 2003 (Use several sheets if necessary)	FILING DATE January 31, 2002	CONFIRMATION NO. 1921 / GROUP 1654

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*		
	AT2	Gow, Andrew J. *et al.*, "Reactions Between Nitric Oxide and Haemoglobin Under Physiological Conditions," *Nature,* 391:169-173 (1998).
	AU2	Gow, Andrew J. *et al.*, "The Oxyhemoglobin Reaction of Nitric Oxide," *Proceedings of the National Academy of Sciences USA,* 96:9027-9032 (1999).
	AV2	Hall, David M. *et al.*, "Hyperthermia Stimulates Nitric Oxide Formation: Electron Paramagnetic Resonance Detection of •NO-Heme in Blood," *Journal of Applied Physiology,* 77(2):548-553 (1994).
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	AX2	Hsu, Li *et al.*, "The Interaction of Human Erythrocyte Band 3 with Cytoskeletal Components, *Archives of Biochemistry and Biophysics,* 227(1):31-38 (1983).
	AY2	Jia, Li *et al.*, "S-Nitrosohaemoglobin: A Dynamic Activity of Blood Involved in Vascular Control," *Nature,* 380:221-226 (1996).
	AZ2	Kermarrec, Nathalie *et al.*, "Impact of Inhaled Nitric Oxide on Platelet Aggregation and Fibrinolysis in Rats with Endotoxic Lung Injury," *American Journal of Respiratory and Critical Care Medicine,* 158(3):833-839 (1998).
	AR3	Liu, Xiaoping *et al.*, "Diffusion-limited Reaction of Free Nitric Oxide with Erythrocytes," *Journal of Biological Chemistry,* 273:18709-18713 (1998).
	AS3	Low, Philip S., "Structure and Function of the Cytoplasmic Domain of Band 3:Center of Erythrocyte Membrane-Peripheral Protein Interactions," *Biochimica et Biophysica Acta,* 864:145-167 (1986).
	AT3	Marletta, Michael A. *et al.*, "Unraveling the Biological Significance of Nitric Oxide," *Biofactors,* 2:219-225 (1990).
	AU3	McMahon, Timothy Joseph *et al.*, "Functional Coupling of Oxygen Binding and Vasoactivity in S-Nitrosohemoglobin," *Journal of Biological Chemistry,* 275(22):16738-16745 (2000).

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	AV3	McMahon, Timothy J. *et al.*, "Concerted Nitric Oxide/Oxygen Delivery by Hemoglobin," *Methods In Enzymology*, 301:99-114 (1999).
	AW3	Moore, Edwin G. *et al.*, "Cooperativity in the Dissociation of Nitric Oxide from Hemoglobin," *Journal of Biological Chemistry*, 251(9):2788-2794 (1976).
	AX3	Okubo, Kenshi *et al.*, "Red Blood Cell Band 3," *Journal of Biological Chemistry*, 269(3):1918-1926 (1994).
	AY3	Pawloski, John R. *et al.*, "Cell-Free and Erythrocytic S-Nitrosohemoglobin Inhibits Human Platelet Aggregation," *Circulation*, 97(3):263-267 (1998).
	AZ3	Pietraforte, Donatella *et al.*, "Role of Thiols in the Targeting of S-Nitroso Thiols to Red Blood Cells," *Biochemistry*, 34:7177-7185 (1995).
	AR4	Rossaint, Rolf *et al.*, "Inhaled Nitric Oxide for the Adult Respiratory Distress Syndrome," *New England Journal of Medicine*, 328(6):399-405 (1993).
	AS4	Santos-Silva, Alice *et al.*, "Altered Erythrocyte Membrane Band 3 Profile as a Marker in Patients at Risk for Cardiovascular Disease," *Atherosclerosis*, 116:199-209 (1995).
	AT4	Soszynski, Miroslaw *et al.*, "Penetration of Erythrocyte Membrane by Peroxynitrite: Participation of the Anion Exchange Protein," *Biochemistry and Molecular Biology International*, 43(2):319-325 (1997).
	AU4	Stamler, Jonathan S. *et al.*, "Blood Flow Regulation by S-Nitrosohemoglobin in the Physiological Oxygen Gradient," *Science*, 276:2034-2037 (1997).
	AV4	Stamler, Jonathan S., "Redox Signaling:Nitrosylation and Related Target Interactions of Nitric Oxide," *Cell*, 78:931-936 (1994).
	AW4	Stamler, Jonathan S. *et al.*, "(S)NO Signals: Translocation, Regulation, and a Consensus Motif," *Neuron*, 18:691-696 (1997).
	AX4	Sugrue, M.F. *et al.*, "L-662,583 is a Topically Effective Ocular Hypotensive Carbonic Anhydrase Inhibitor in Experimental Animals," *British Journal of Pharmacology*, 99(1):59-64 (1990).

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	AY4	Takahashi, Yuko *et al.*, "Nitrosyl Hemoglobin in Blood of Normoxic and Hypoxic Sheep During Nitric Oxide Inhalation," *American Journal of Physiology*, 274(1):H349-H357 (1998).
	AZ4	Vanin, Anatoly F. *et al.*, "Iron Catalyzes Both Decomposition and Synthesis of S-Nitrosothiols:Optical and Electron Paramagnetic Resonance Studies," *Nitric Oxide:Biology and Chemistry*, 1(3):191-203 (1997).
	AR5	Vaughn, Mark W. *et al.*, "Erythrocytes Possess an Intrinsic Barrier to Nitric Oxide Consumption," *Journal of Biological Chemistry*, 275(4):2342-2348 (2000).
	AS5	Walder, Joseph A. *et al.*, "The Interaction of Hemoglobin with the Cytoplasmic Domain of Band 3 of the Human Erythrocyte Membrane," *Journal of Biological Chemistry*, 259(16):10238-10246 (1984).
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	AU5	Wong, Bradley K. *et al.*, "Dose-Dependent Pharmacokinetics of L-693,612, a Carbonic Anhydrase Inhibitor, Following Oral Administration in Rats," *Pharmaceutical Research*, 11(3):438-441 (1994).
	AV5	Yonetani, Takashi *et al.*, "Electron Paramagnetic Resonance and Oxygen Binding Studies of α-Nitrosyl Hemoglobin," *Journal of Biological Chemistry*, 273(32):20323-20333 (1998).

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